W[illegible]flowers of Algonquin Provincial Park

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Wildflowers of Algonquin Provincial Park

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Anyone who visits Algonquin Park during the warmer months of the year will see wildflowers. The spring fisherman portages through sunlit carpets of Spring Beauties and Trout Lilies; the summer motorist drives past spectacular roadside stands of Orange Hawkweed and pink Fireweed; and the canoeist paddles down quiet rivers fringed with showy water-lilies and Pickerelweed. Wildflowers are very much a part of Algonquin and, to judge by the questions we receive, a very popular part at that. People are always asking the names of the flowers they see and our summer wildflower hikes are well attended by campers wishing to know more about the subject.

Because the interest in wildflowers is almost universal, it is a little strange that wildflowers are quite difficult to define. No one would call a maple or a birch a "wildflower", and yet they also are plants that produce beautiful flowers having the same purpose as those of orchids or daisies. Nor would anyone think of grasses or sedges as wildflowers, although they too produce flowers (small and not brightly-coloured but having their own beauty just the same). In fact, about the only thing that distinguishes "wildflowers" from all the other flowering plants is that they are not trees and they have proportionately larger, more eye-catching blooms.

The trouble is that there is no sharp division between the minority of flowering plants that everyone would call wildflowers without hesitation, and the majority whose flowers are too small or dully-coloured to be considered special. There is really just a continuous scale from plants with very tiny and inconspicuous flowers at one end, to those with very large and spectacular flowers at the other end. That is why it is impossible to say how many of the almost 1000 species that have been recorded in Algonquin are "wildflowers". It's all a matter of personal opinion -- some people might say 150, others might say 300.

This may seem a little vague and discouraging but it is no reason not to learn some of the more spectacular wildflowers. Even with the fifty-five shown in this book you will have gone a long way towards learning the most common and appealing of our Park wildflowers, and you will get some idea of the incredible richness, variety, and interest of the plant world as a whole.

You will also discover that one of the reasons Algonquin is a good place to see wildflowers is the Park's richness in distinctly different habitats. Algonquin lies in a transition zone between coniferous forests typical of areas to the north of the Park, and hardwood forests more typical of areas to the south. Thus, both forest types are found inside the Park boundaries and within each type are quite different sets of wildflowers. Another factor contributing to the presence of many kinds of wildflowers is the Park's varied topography containing rounded hills, bare rock, sand plains, lakes, ponds, bogs, and rivers. Often a short walk will take you through several quite different habitats, and you can expect to see corresponding changes in wildflowers along the way. Added to this natural diversity, man has introduced a new habitat to the Park -- cleared areas around buildings and along roadsides -- and here you will find yet another group of wildflowers not to be found in the other Park habitats.

In the following pages we present fifty-five typical Algonquin wildflowers, discussed under four different habitat headings: hardwood forests, coniferous forests, wetlands (including bogs, shorelines, and open water), and finally roadsides. We hope you will take pleasure in recognizing flowers you have already seen, or in getting to know new ones. The English and Latin names used in this book follow those given in the 8th edition of "Gray's Manual of Botany" (Fernald, 1950), and the French names are those given in "Flore Laurentienne" (Marie-Victorin 1964).

Please remember that it is an offence to pick wildflowers in any provincial park. Leave them where they are, to be enjoyed by those who follow in your footsteps.

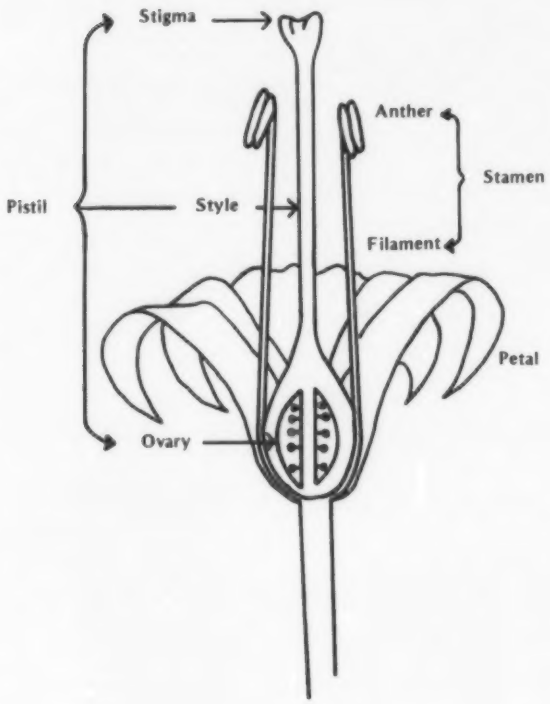


Diagram of a generalized flower

How Does a Flower Work?

Everyone knows that flowers serve to produce seeds, but how they do this is sometimes not so clear. Although their sizes, shapes, and arrangements have countless variations, most flowers contain male parts called stamens which produce pollen, and at least one female part called the pistil which receives pollen from the same or another flower. When tubes growing from the pollen grains unite with ovules in the ovary at the base of the pistil, the ovules are fertilized, and they then grow into seeds. If ovules are fertilized by pollen from the same flower, the flower is said to be "self-fertilized", and if the pollen comes from a different plant, the flower is said to be "cross-fertilized". Some flowers are always cross-fertilized because the pollen is prevented from reaching the pistil of the same flower by some physical structure of the flower, because the male and female parts are present at different times in the life of the flower, or because there are separate male and female flowers on different plants.

Whether from the same or a different flower, however, pollen must somehow get from a stamen to a pistil if the vital process of fertilization and seed production is to begin. Here again, there are many variations. In some self-fertilized flowers, the pollen merely falls from the stamen onto the pistil. In other plants, great quantities of pollen are blown by the wind, or carried by water, and some eventually reaches the pistils of other flowers. Still other plants depend on some agent like bees, butterflies, or even birds to unwittingly carry the pollen from the stamens to the pistil of the same or other flowers. Many insect and bird-pollinated flowers produce large quantities of edible pollen or nectar (a highly attractive liquid food). Moreover, they have evolved showy, colourful blossoms to advertise their presence to any potential pollinators. Not surprisingly, it is flowers in this class that we are most likely to notice ourselves and to give the name "wildflowers".

Flowers of the Hardwood Forests

Although most people think of Algonquin Park as being "up north", the fact remains that well over half the Park is covered by typically southern forests of broad-leaved deciduous trees, mainly Sugar Maple, Beech, and Yellow Birch. Good examples of such hardwood forests may be seen at the West Gate and the Park Museum.

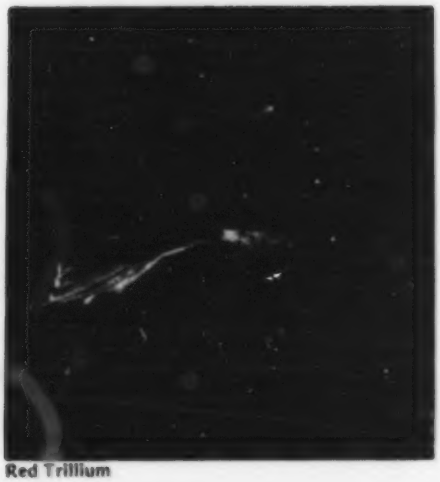
It would be easy to get the impression, also, that our hardwood forests are a very poor place to see wildflowers. From early June to late September (the period when most visitors come to the Park), there are hardly any flowers to be seen on the hardwood forest floor. The problem is that the shade cast by the overhead canopy of sugar maple leaves is so dense that the growth of wildflowers is just about impossible. Ironically, Algonquin hardwood forests are quite leafless for over half the year, but then there are other, even more serious problems for wildflowers – namely extreme cold, and snow up to one metre deep.

There is one brief period, however, between the disappearance of the snow in late April and the leafing out of the trees in late May, when conditions are ideal for wildflowers. The forest floor is flooded with sunlight and often literally covered, as far as the eye can see, with carpets of colourful blossoms. May is the month to see this spectacle, for when the trees leaf out and plunge the forest floor back into deep shade, the flowers are finished blooming. In some cases, all of the above ground parts of the plants wither away leaving no visible trace, until eleven months later, they once again spring up on the heels of winter for their brief fling in the spring sunshine.

There are a very few wildflowers that succeed in growing and flowering in the deep shade of the summer hardwoods. The most interesting are plants that derive their energy, not directly from sunlight, but from nearby living trees or dead plant matter on the forest floor. In fact, these ghost-like flowers, faced with the almost total lack of sunlight, have lost the chlorophyll that gives other plants their green colour and enables them to capture the sun's energy for the manufacture of food from carbon dioxide and water.

The Trout Lily is marvellously adapted to life in the hardwood forest.

Spring Beauty grows in dense carpets.



Red Trillium

The flower clusters of Wild Sarsaparilla grow on a separate stalk below the leaves.

Trout-lily (Lily family)

Erythronium americanum Ker

Erythrone d'Amérique (Aïl doux)

The most successful and the most ideally adapted of the hardwood forest wildflowers in Algonquin is the Trout-lily. Even before the frost is out of the ground, countless thousands of sharp-pointed Trout-lily leaves are piercing upwards, right through the thick, snow-flattened mat of dead sugar maple leaves, and into the warming sunshine. Other leaves (enclosing the rapidly growing flowers) soon follow and, often before the ice has left our Algonquin lakes, the hardwood forest floor is carpeted with the spotted leaves and nodding yellow flowers of the Trout-lily.

The fact that relatively few of the flowers produce seeds is not that important to this marvellous species because many individuals are produced from new underground bulbs that have "budded" from older bulbs. Thus, one plant may produce hundreds, or even thousands, of copies of itself and slowly colonize large patches of forest floor. Some of these colonies, recognizable by the identical patterns of leaf-spotting on plants covering wide areas, are as old as two or three centuries – far older than the surrounding trees. In spite of their great age and obvious success, the spring carpets of Trout-lilies have all disappeared from view by early June when the trees leaf out. Unseen by us, however, the underground bulbs have already started to form the leaves and flowers that will once again cover the forest floor the following spring.

Spring Beauty 'Purslane family)

Claytonia caroliniana Michx.

Claytonie de Caroline

Delicate, pink-striped blossoms of Spring Beauty, densely carpeting areas of the forest floor, are one of the prettiest sights of the spring hardwoods in Algonquin. During most of the year our colonies of Spring Beauty are invisible – persisting as deeply buried, tuberous roots. But when the first rays of spring sunshine warm the special underground runners just below the soil surface, the colonies are reactivated and are soon in flower once again. The ripe seeds are ejected with considerable force from the tiny plants – sometimes as far as 60 centimetres.

Red Trillium (Lily family)

Trillium erectum L.

Trille dressé

This species is by far the most common of Algonquin's four trilliums, and may be found easily by any visitor to an Algonquin hardwood forest in May. The flowers have no nectar, but their disagreeable odour (and perhaps their deep red colour also) attract carrion flies that accomplish pollination – eventually resulting in the production of a single, reddish-black berry.

The Red Trillium is one of several Algonquin flowers whose closest relatives are found in China and Japan.

Wild Sarsaparilla (Ginseng family)

Aralia nudicaulis L.

Aralie à tige nue (Salsepareille)

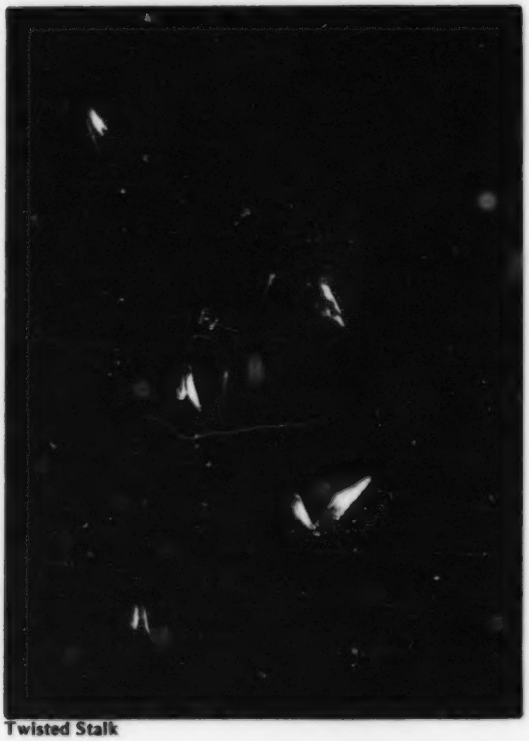
During the summer, in mixed hardwood-coniferous forests, the dark green, umbrella-like fronds of Wild Sarsaparilla are almost everywhere. In June, the plant bears globe-like clusters of small greenish-white flowers on a separate stalk under the leaves, and in August, correspondingly spherical clusters of black-purple berries. Wild Sarsaparilla is, however, much given to spreading by sending up new shoots from an underground network of horizontal rootstocks and comparatively few members of any colony will bloom.

The rootstocks, also being the part of the plant where energy is stored, were used by Indians as a subsistence food and by early settlers as a medicinal tea.

Indian Pipe has no chlorophyll.

Painted Trillium

The Spotted Coral-root can grow in dense shade.



Twisted Stalk

Indian Pipe (Wintergreen family)

Monotropa uniflora L.

Monotrope uniflore

The deathly-white Indian Pipe, growing in little clusters in the deep mid-summer shade of the hardwood forest floor, is one of the most puzzling of all flowers. Not only does it succeed in growing and blooming under impossibly light-starved conditions, but it does so without the benefit of leaves with which to capture sunlight or the green chlorophyll used by almost all other plants to manufacture food.

The answer to the puzzle is that the Indian Pipe is a parasite, living off a fungus in the soil. The fungus, in turn, draws its nourishment from the roots of nearby trees. Thus, the Indian Pipe beats the shade problem caused by the canopy of overhead trees by indirectly siphoning off energy from the roots of those very same trees.

There is something almost sinister in this strange mode of existence, accentuated by the resemblance of Indian Pipe clusters to hooded, elfin ghosts inaudibly conversing among themselves on the forest floor. As a final, chilling touch, the maturing plants slowly raise their single flowers to face the forest canopy, and turn from pallid white to dull, withered black.

Painted Trillium (Lily family)

Trillium undulatum Willd.

Trille ondulé

Many people mistake the Painted Trillium for the larger White Trillium, the floral emblem of Ontario. Actually, it is a surprising fact that although our province's official flower grows abundantly in many places all around its most famous Park, it is extremely rare within Algonquin itself. It is speculated that the high elevations and correspondingly more rigorous climate of the Park may prevent the White Trillium from doing well here.

Its smaller relative, the Painted Trillium is reasonably common, however, and can easily be identified by the red streaks radiating out from the flower centre.

Spotted Coral-root (Orchid family)

Corallorhiza maculata Raf.

Corallorhize maculée

The Spotted Coral-root, like the Indian Pipe, is a flower of the shady, summer hardwoods and like it, possesses neither leaves nor chlorophyll. Both plants have, as it were, given up on trying to use the meagre amounts of sunlight they receive to manufacture food, and have turned instead to other sources of energy.

There are major differences between the two plants, however, not the least of which is that the Coral-root is an orchid and evolved its bizarre life-style quite independently. Also unlike the Indian Pipe, the Coral-root is believed to derive its energy from the decaying leaves of the forest floor. There is a similarity only insofar as the food is transmitted from the dead leaves to the Coral-root by a fungus closely associated with the orchid's roots (which really do resemble a piece of coral).

Twisted Stalk (Lily family)

Streptopus roseus Michx.

Streptope rose (Rognons de coq)

Under the graceful zig-zag branches and pointed leaves of the Twisted Stalk appear pale, rosy, bell-shaped flowers in late May or early June and bright red berries in late summer. People often miss the flowers and berries when they view the plant only from above.

The berries, which have a bland, cucumber flavour, are eaten in northern New England under the name "liver-berries", suggesting they have been used as a herbal medicine.

There are several kinds of coniferous forests in Algonquin.

Northern Blue Violet

Trailing Arbutus

Wildflowers of Coniferous Forests

Although over half of Algonquin's land area is occupied by southern hardwood forests, most visitors probably notice the Park's less familiar, "northern", coniferous forests even more. In a sense, however, it is misleading to think of Algonquin's coniferous forests as a single entity (as with the hardwoods) because the Park has several quite different kinds. Lakeshores throughout Algonquin are fringed with forests of Hemlock, Cedar, Balsam, and White Spruce. Poorly drained lowland areas often support large stands of Tamarack and Black Spruce. Hemlock groves occur in wetter areas of the hardwood forest; and on the drier, sandier east side of Algonquin, large upland areas are covered with White, Red, and Jack Pine.

There are major differences among these various types of coniferous forest and yet they often have certain things in common that set them apart as a group from hardwood forests. They do not have the hardwoods' thick layer of leaves on the forest floor; they often have much less shade; and, in spite of their own differences, they often share the same wildflowers. The Pink Ladyslipper, for example, grows abundantly in the dry, eastern pine forests but also in very wet forests of Black Spruce. For present purposes, therefore, it seems best to lump all our coniferous forest types together as one major habitat, and to present typical flowers that occur in all or several types under the single heading of "coniferous forest".

Northern Blue Violet

(Violet family)

Viola septentrionalis Greene.

Violette septentrionale

Of the fifteen species of violet found in Algonquin, at least seven could be called common. The most familiar, however, would be the Northern Blue Violet which is the common species of open, coniferous woods (and frequently of sunny meadows as well). The petal colour varies from deep violet to pale lilac, and the heart-shaped leaves are thin and soft.

The blooming period for this and most of our other violets is late May and June, but frequently the flowers remain unfertilized and seeds are produced instead from unopening, self-fertilizing, underground flowers borne on runners.

Seven of our Park violets have blue flowers, seven have white flowers, and one is yellow.

Trailing Arbutus

(Heath family)

Epigaea repens L.

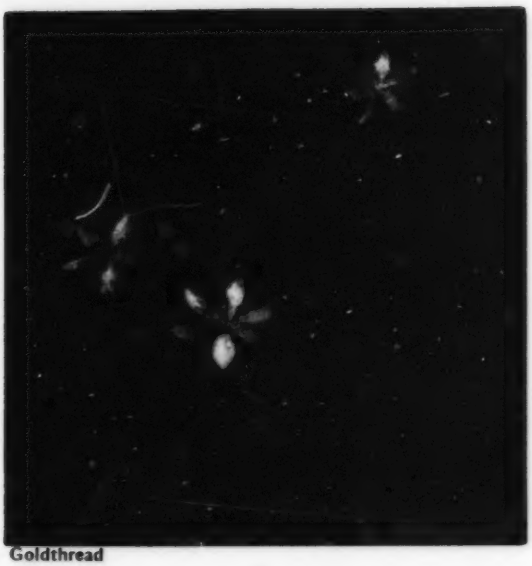
Epigée rampante (Fleur de mai)

When the snow has barely left the ground, this hardy inhabitant of peaty woods, rocky hillsides, and sandy clearings puts forth clusters of extremely fragrant small, waxy, pink or white flowers among broad, oval, leathery leaves growing close to the ground. Trailing Arbutus has been proposed as the emblematic flower of New England, and is sometimes referred to as "Plymouth May-flower" in allusion to the fact that it was the first flower to cheer the hearts of the Pilgrim Fathers after the rigors of their first New England winter.

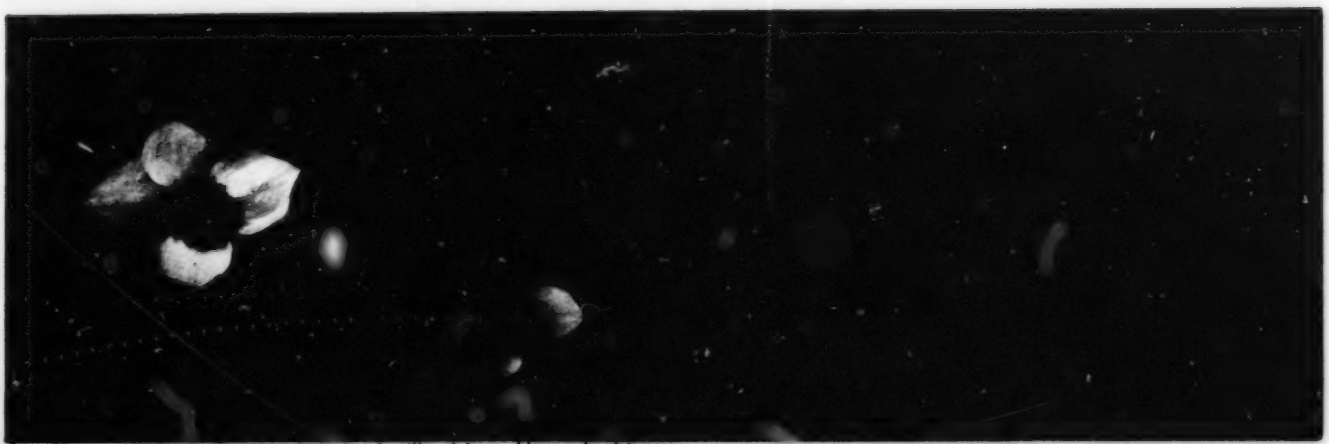
Although quite common in Algonquin, the Trailing Arbutus has been extirpated from many areas of North America by misguided gardeners attempting to transplant it from its natural habitat.

The Wood Sorrel often grows in the dense shade of hemlock groves

Fringed Polygala, sometimes called "Gaywings".



Goldthread



Bunchberry, whether in flower or fruit, is a familiar sight to Algonquin visitors.

Wood Sorrel (Geranium family)

Oxalis montana Raf.

Oxalide de montagne

The Wood Sorrel succeeds where most plants would quickly die. In the deep shade and acid soil of Hemlock groves, or thick stands of Balsam Fir and spruce, the ground is often covered with thousands of these delicate little plants with their clover-like leaves. Somehow, the Wood Sorrel extracts enough energy under these apparently hostile conditions to produce not only the visible, aerial flowers we see each July, but also a second set of flowers that remain closed and hidden under the moss or soil on the forest floor. Both types of flowers produce seeds but only those of the aerial flowers are projected away from the parent plant when they ripen.

Goldthread (Crowfoot family)

Coptis groenlandica (Oeder) Fern.

Coptide du Groënland (Savoyane)

Barely twelve centimetres tall, the Goldthread with its dark, shiny green leaflets is a characteristic plant of our shady coniferous forests. The small, white flower appears in June but the evergreen leaves remain on the plant all year long.

As with many plants that must contend with poor light conditions, the Goldthread forms growing colonies by means of an underground network of rootstocks. In this case, the rootstocks are a remarkably brilliant gold colour and responsible for the name "Goldthread". Indians used these bitter-tasting rootstocks for tanning leather, and pioneers used them for several medicinal purposes. These included a tonic for stomach ailments and Vitamin C deficiency, and as an antiseptic for cold sores. The latter use was the origin of another popular name for Goldthread – "canker root".

Bunchberry (Dogwood family)

Cornus canadensis L.

Cornouiller du Canada

One of the commonest of all our ground-cover plants, the Bunchberry is closely associated with Algonquin in the minds of many Park visitors. In June, the coniferous forest floor is covered with the pretty white floral heads of this plant, and in midsummer by its clusters of bright red berries.

Although it is far from being shrub-sized, many people recognize Bunchberry as a member of the dogwood family from the veins and general shape of its leaves. Actually, Bunchberry plants are bigger than you might think, because what appear to be individual plants are linked up to each other by underground rootstocks and are parts of a single, much larger plant – often covering many square yards. This may seem a rather lowly lifestyle for a dogwood but it is one that makes a lot of sense for a plant growing in quite shady conditions. If it grew a sturdy trunk like its larger relatives in more open situations, the Bunchberry would be wasting a lot of what little sunlight energy it receives. To be sure, it would get its leaves up off the ground, but this would not be any real advantage since it would still be just as shaded by overhead trees as it was on the forest floor. The Bunchberry therefore economizes by dispensing with an energy-demanding trunk and using the ground for support instead. The surplus energy gathered by many individual leaves growing just above ground level can then be diverted through the underground rootstocks to sustain growth at the leading edge of the sprawling Bunchberry plant, or into the production of flowers on some individual stems projecting above ground. You will notice that the stems without flowers almost always have only four leaves while those that bloom usually have six.

The berries, incidentally, are not poisonous but have such small amounts of insipid flesh around a large pit that they are of no interest as food to humans.

Fringed Polygala (Gay-wings) (Milkwort family)

Polygala paucifolia Willd.

Polygala paucifolié

Sometimes mistaken for an orchid, this delightful little denizen of our late May and June coniferous woods lives up to its popular name of "Gay-wings" with its bright rose-purple petals resembling the wings of small butterflies. Like the violets which are often found blooming in the same places, the Fringed Polygala has not only obvious aerial blooms, but also self-fertilizing underground flowers that we never see without a special search. The existence of these underground flowers raises an interesting question. How are the seeds they produce dispersed to new locations suitable for germination and the growth of new plants? Through a painstaking study carried out here in Algonquin, it was learned that on the outside of each seed there is a transparent sac-like appendage filled with an oily liquid which ants find particularly appealing. At least three species of ants regularly cut the "baited" seeds out of the ripe fruits (both underground and aerial) and carry them as far as ten metres back to their nests. When the ants have eaten the oily appendages they discard the undamaged seeds in nearby refuse dumps – which are often quite suitable as seedbeds for new Fringed Polygala plants.

Pink Lady's-slipper

Wild Lily-of-the-Valley

Low Sweet Blueberry

Twinflower, which grows in cool, mossy forests.

Pink Lady's-slipper (Mocassin flower) (Orchid family)

Cypripedium acaule Ait.

Cypripède acaule (Sabot de la vierge)

Though most abundant in rather dry, White and Red Pine forests on the east side of Algonquin, the Pink Lady's-slipper, or Moccasin Flower, may be found throughout the Park in damp, mossy, coniferous forests as well.

As an orchid, this lady's-slipper is not unusual in having an extremely complex flower in which self-fertilization is all but impossible, but which is admirably suited to cross-pollination by insects. In the case of the Pink Lady's-slipper, the insects are bees which can gain entry to the flower through the longitudinal, incurved split running the length of the main pouch. Once inside, however, the bees are forced to exit by another opening near the top of the flower and to pick up pollen as they leave. If the bee visits another Lady's-slipper flower it will follow the same path but unwittingly deposit pollen from the first flower and assure cross-pollination. In addition to this method of reproduction, the Pink Lady's-slipper often spreads by underground rootstocks.

Twinflower (Honeysuckle family)

Linnaea borealis L.

Linnée boréale

The tiny, pink, sweet-scented blossoms of this plant are usually borne in pairs on thread-like, forking stems rising from dense mats of round-leaved creepers. The blooming season in Algonquin is June to mid-July; the habitat is cool, coniferous woods. Like many other small plants of northern forests, Twinflower has evergreen leaves which survive the long winter months thanks to the insulating properties of the snow cover and to resinous oil contained in the leaves themselves.

Twinflower was a favourite of the great Swedish botanist, Carl von Linné, who invented the system of scientific names now used throughout the world for all plants and animals. In recognition of this contribution to science, a close friend gave Twinflower the Latin name *Linnaea.*

Low Sweet Blueberry (Heath family)

Vaccinium angustifolium Ait.

Airelle à feuilles étroites (Bleuet)

Everyone knows what a "blueberry" is but it is less well known that there are several different kinds – of which two are extremely abundant in Algonquin. Low Sweet Blueberry is the low-growing, shiny-leaved blueberry of dry, sandy clearings or rocky hillsides and ledges. Although it often occurs together with Canadian Blueberry (*V. myrtilloides*), the taller, more downy shrub, the Low Sweet Blueberry tends to do better in high, dry, thin-soiled situations. Areas recently burned by forest fires are often ideal habitat for blueberries because of the open, sunny conditions.

The pretty, white, bell-shaped blossoms are borne in small clusters in May and June. The nectar-containing flowers are commonly visited, and very likely pollinated, by blackflies which are thus responsible in large part for the delicious berries that appear in late July and early August. The quantity and quality of blueberries vary greatly from year to year and this has a great effect on the fortunes of black bears and other wildlife species that feed heavily on the blueberry crop.

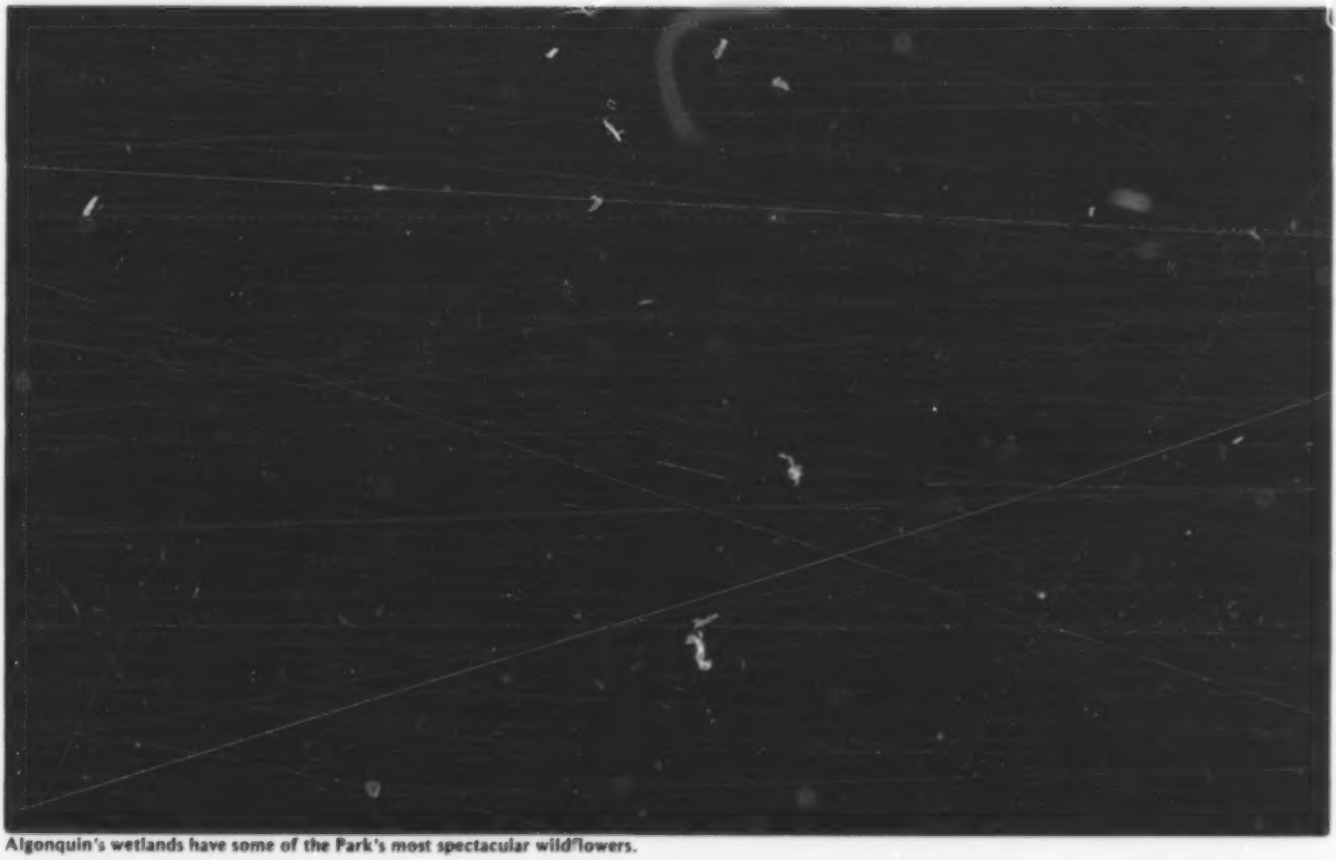
Of course, summer campers also appreciate a good blueberry year. It is somewhat ironic, however, that few people make the connection between blueberry pies on the one hand, and the forest fires and blackflies which are in large part responsible for those unbeatable desserts!

Wild Lily-of-the-valley (Lily family)

Maianthemum canadense Desf.

Maianthème du Canada

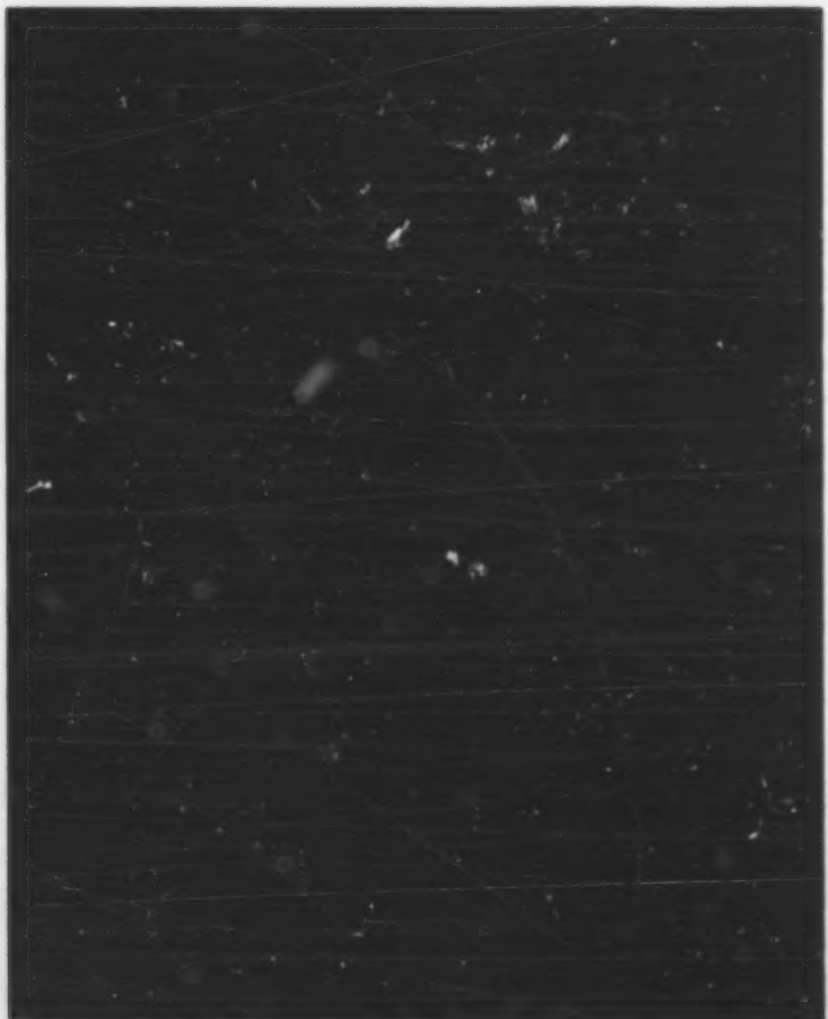
This extremely successful native of our coniferous and mixed woods often forms extensive mats on the forest floor. Although there are many blossoms in these colonies, the majority of shoots are sterile, with but a single leaf, in contrast to the flowering shoots with two smaller, alternate leaves. As with the Bunchberry (which often blooms nearby), the sterile shoots divert energy to the flowering shoots through underground rootstocks. The small, bittersweet (but not poisonous) berries are pale green at first, dappled with purple-brown spots, but turn bright red in the fall.



Algonquin's wetlands have some of the Park's most spectacular wildflowers.

Sweet Gale

Cardinal-flower



The Round-leaved Sundew can trap and digest insects

Flowers of the Wetlands

As with "coniferous forests", the term "wetlands" is used here to include several quite different habitats. They range from shallow bays and beaver ponds, to the shores of lakes and rivers, to beaver meadows and bogs. The category is so broad, in fact, that it is difficult to define a completely satisfactory boundary between "wetlands" and coniferous forests. Specifically, it is hard to know when a mature spruce bog, gradually becoming drier and being invaded by more and more Black Spruce and Tamarack ceases to be a "bog" and is better described as a damp coniferous forest. It could well be argued, for example, that Sheep Laurel, which grows in the shadier portions of older bogs – and also in drier, upland areas – should be regarded as a plant of coniferous forests rather than of "wetlands."

In spite of this problem, we think most visitors will recognize what we mean by wetlands, simply by the fact that they are indeed wet, or very close to water, and that they do not receive dense shade from overhead trees.

Although they share these fundamental characteristics, however, the various types of wetlands still have widely differing conditions – and therefore different problems for flowering plants that grow there. Plants that grow in shallow water, for example, have to contend with winter ice, with getting air to their roots, and with the problem of dispersing their seeds in an aquatic environment. Shoreline plants grow in what seems to be a particularly favourable environment, with plenty of water and sunshine, but one that is annually subjected to the violence of spring floods.

Bog plants face the severest test of all since they grow, not in mineral soil, but on mats of very acidic, semi-decayed vegetation (peat) that is extremely poor in available nutrients such as nitrogen, calcium, and phosphorus which plants (and we) must have for proper growth. Faced with these critical shortages, many bog plants keep their leaves all year round (so as not to lose the precious nutrients they contain), and several have evolved means of catching insects (as a valuable dietary supplement).

Cardinal-flower (Lobelia family)

Lobelia cardinalis L.

Lobélie du cardinal

The Cardinal-flower is quite rare in much of Southern Ontario because of picking, but canoeists in Algonquin can still encounter it in spectacular, scarlet thousands along the exposed summer banks of the Barron and lower Petawawa River systems on the Park's east side.

The sweet-scented, and nectar-containing flower is particularly well-adapted to cross-pollination by hummingbirds. If you have ever been buzzed by a hummingbird while wearing red clothing you will appreciate that the Cardinal-flower's brilliant red colour is especially attractive to hummers. Also, if you examine the flowers closely, you will see that the stamens, protruding out from the flower tube, are bent down at the end in such a way that they will brush pollen onto the forehead of a hummingbird that inserts its bill into the flower to sip nectar. Later, when the stamens are no longer producing pollen, the pistil (or female part of the flower) protrudes through the finished stamens. If the flower is visited again by a hummingbird dusted with pollen from another flower at an earlier stage of development, the flower will pick up the pollen and be fertilized – a marvellously ingenious arrangement for the benefit of both bird and flower.

Round-leaved Sundew (Sundew family)

Drosera rotundifolia L.

Rossolis à feuilles rondes

The Round-leaved Sundew, can be found in almost any open wet patch in Algonquin, and even on floating logs in lakes and ponds. The leaves (pictured here) are green but they are thickly covered with tiny red bristles, each of which exudes at its tip a shimmering droplet, whence the name sundew. The dew-drops are in fact quite sticky and they not only trap insects, but help to digest them. Once the leaf has secured its prey, it folds over, bringing more droplets into contact with the insect, and only re-opens when the digestive process is complete.

The reason for such a bizarre life style is that the Sundew grows in open bogs or on sterile soil that contains almost none of the vital nutrients such as nitrogen and phosphorus needed by the Sundew (and all other plants and animals). By evolving its insect-trapping leaves, the Sundew has been able to exploit a novel source (for a plant) of such nutrients, and can thus grow in the highly acid, nutrient-poor environments.

Sweet Gale (Wax myrtle family)

Myrica gale (L.)

Myrique baumier (Bois-sent-bon)

The shrub with the fragrant gray-green leaves growing in great abundance along lakes, river and pond margins in Algonquin is Sweet Gale. The generic name, *Myrica*, is derived from the Greek word for perfume and, indeed, the leaves which are densely covered with minute resinous dots, yield a fine, spicy fragrance when crushed. Early settlers had the habit of putting Sweet Gale leaves in the wash, so that clothes came out not only sweet-scented but insect-repellent as well.

Sweet Gale has tiny root nodules containing fungi that are capable of extracting nitrogen from the air and significantly increasing the supply available to the roots. Theoretically, this should enable Sweet Gale to grow in nitrogen-poor environments such as bogs, but in fact it is usually found close to open water. Perhaps one of the reasons is that the seeds of Sweet Gale, having two air-filled floatation structures, are admirably suited to dispersal by water but not overland. Another disadvantage is that Sweet Gale, unlike the evergreen shrubs of true bogs, sheds its leaves each year – and with them a significant fraction of the plant's hard-to-replace nutrients.

The flowers of Sweet Gale appear in May, before the plants leaf out, and are usually seen only by spring fishermen. Even these early visitors to the Park may not recognize them as flowers because, like many flowers (in fact the majority), they are not showy or "beautiful" in the conventional sense. We doubt very much, however, that anyone taking a close look could fail to be impressed by the subtle browns and purples of these flowers so common along Algonquin's waterways in May.

◄ **Dense Cotton-grass** (Sedge Family)

Eriophorum spissum Fern. **Linaigrette grêle**

Although the word "grass" appears in its common name, Dense Cotton-grass is in fact a member of the sedge family, whose members usually have solid, three-sided stems – distinguishing them from grasses (whose stems are usually hollow and cylindrical).

Although there are over 100 kinds of sedges in Algonquin (and about 80 grasses), they are almost always passed over as just "weeds" by most visitors. Their great handicap in the human popularity contest is that their flowers, being pollinated by wind, have no need to attract insects or birds by being large and colourful. They are, in fact, usually small, greenish, and inconspicuous from any distance.

Anyone who takes the time to look closely, however, will see that grass and sedge flowers make up for their lack of showy colours by an amazing range of beautiful forms. Dense Cotton-grass (shown here in full flower) is a good example that you can see in many of our open bogs.

▲ **White Spiraea (Meadowsweet)** (Rose family)

Spiraea latifolia (Ait.) Borkh. **Spirée blanche**

The frothy white spikes of blossom so common around our bogs and streams are those of the White Spiraea or Meadowsweet. The latter name is somewhat misleading since the plant neither lives in meadows nor is sweet-scented. The name is actually a corruption of "mead-wort" which referred to the use of the blossoms in the preparation of home-brewed mead, or honey wine.

The similarly shaped, pink blossoms often found sharing the same stands are those of the closely related Steeplebush *(Spiraea tomentosa)*. The dried leaves of both species have been used as a tea substitute.

◄ **Joe-Pye-weed** (Composite family)

Eupatorium maculatum L. **Eupatoire maculée**

In late summer, Joe-Pye-weed is a common sight along the margins of our bogs and beaver meadows. Individual plants often reach two metres in height, and the blossoms of "crushed raspberry" colour are very popular with insects – especially among butterflies of the fritillary group. Their rich, warm fragrance is due to a small quantity of a volatile oil secreted by each of the hundreds of individual florets making up each flower head.

Joe Pye is said to have been an eighteenth century New England Indian who was supposed to be able to cure typhoid fever with an extract of this plant.

▲ Marsh Blue Violet (Violet family)

Viola cucullata Ait. **Violette cucullée**

Few wildflowers can match the quiet, intimate charm of violets. This particular species, which is common in wet places, may be recognized by the darker violet colour towards the centre of the flower, by the short lower petal, and by the fact that the flowers are higher than the leaves.

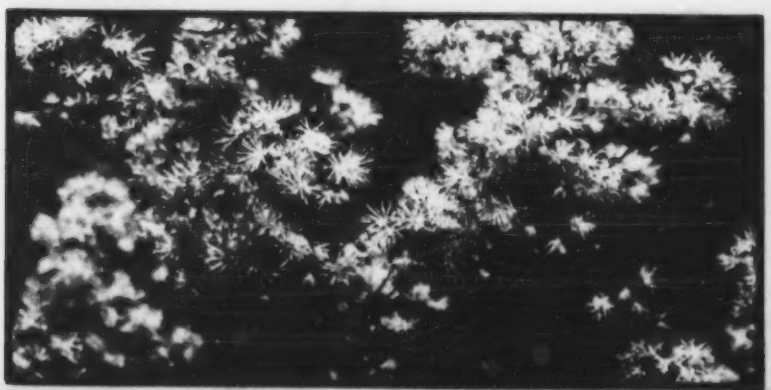
As with the other violets, the Marsh Blue "covers its bets" as it were, by having two kinds of flowers. The obvious ones shown here are attractive to insects, are often cross-pollinated, and project their ripe seeds some distance from the parent plant. The other kind of flower is quite inconspicuous since it possesses neither petals or sepals and never opens. This type is self-pollinated, and the resulting seeds come to rest directly below the parent violet.

Tall Meadow-Rue (Crowfoot family)

Thalictrum polygamum Muhl. **Pigamon pubescent**

Our pretty and delicate Tall Meadow-Rue prefers damp margins where, in mid- to late summer, it often approaches two metres in height. This flower gets so big, in fact, that beavers have been known to fell them like trees. Such prodigious annual growth (which inspired the scientific name *Thalictrum*, meaning "fast-growing") is made possible by food reserves stored the previous year in the underground rootstocks.

Tall Meadow-Rue has separate male and female flowers. The female ones are rather obscure, but the male, or staminate, flowers (shown here) are especially feathery and attractive. ▼



Rose Pogonia (Orchid family)

Pogonia ophioglossoides **Pogonie langue-de-serpent**

Thirty-five species of orchids have been found in Algonquin, but most are rather rare and not often seen. The Rose Pogonia is commoner than most, but since it grows on very wet, open, sphagnum bogs, especially near the water's edge, finding it usually requires a special search. The lovely form and colour of the single flower, and its beautiful fragrance, make getting down on your hands and knees for a close look well worthwhile – even in a bog! ▼

Pitcher-plant

(Pitcher-plant family)

Sarracenia purpurea L.

Sarracénie pourpre (Petits cochons)

Although the Pitcher-plant possesses a large, reddish-purple and green flower borne upside-down at the end of a tall stem, the leaves, which give the plant its name, are even more interesting. Often marked with conspicuous red venation, each leaf is indeed shaped like a pitcher, and almost always there is trapped rain-water in the bottom. Insects, attracted by the pitcher's red colour and nectar-producing glands, often fall into these death pools, and finding escape impossible up the smooth walls usually lined with downward pointing bristles, eventually drown. The dead insects are eventually digested, partly by the Pitcher-plant's own digestive enzymes, and partly by bacteria, to the point where the insect matter can be absorbed by and incorporated into the Pitcher-plant's tissues.

Thus the Pitcher-plant succeeds in supplementing the meagre supply of nitrogen and other nutrients available in its acidic, boggy environment.

Strange to say, some forms of life have learned to live in Pitcher-plant leaves and eat small particles from the plant's disintegrating insect prey before the plant can completely absorb and digest them. One type of mosquito, for example, passes its larval stage in Pitcher-plant leaves and nowhere else. You will be happy to know that it is one of the few types of mosquito that do not bite humans!

Leather-leaf

(Heath family)

Chamaedaphne calyculata (L.) Moench

Cassandre caliculé (Faux bleuets)

Leather-leaf is the metre-high shrub that covers large areas of open bog in almost pure stands. As such, it is a characteristic sight to any summertime Park visitor but very few people see it in flower. This is because Leather-leaf puts out its small, white, flowers in May, almost before the snow has gone. It has this ability because the flowers have been generated the summer before, and by the previous autumn are virtually fully formed.

Like many other bog species, this plant keeps its leathery leaves all year round as a nutrient conservation measure. It is also aided in its difficult struggle to extract nutrients from the bog peat by a close association of its roots with soil fungi. These fungi help supply the Leather-leaf with nitrogen, which is in especially short supply in the bog environment.

Labrador Tea

(Heath family)

Ledum groenlandicum Oeder

Lédon du Groënland

Labrador Tea blooms a little later than the other bog heaths, and its delicate umbels of white flowers may still be seen by Park visitors in July. The most curious characteristic of Labrador Tea is its leaves, which have strongly inrolled margins and whose undersides are densely covered by white or orange "wool". Both these features, serving to reduce water loss from the leaves, are commonly found in desert plants – and they seem inexplicably out of place in Labrador Tea which grows in very wet bogs. The catch is that, being a plant of such a nutrient-starved environment, Labrador Tea retains its leaves all year round so as not to lose the hard-to-come-by nutrients they contain. This is not a problem except in early and late winter when the leaves are exposed to the air, and at the same time the roots are frozen in ice. The result is that Labrador Tea can lose water to the air through its leaves, but not replace the water through its roots. Anything that can help slow down the loss of water through the leaves is therefore of great value to the Labrador Tea, and those desert-plant features of its leaves make a lot of sense after all.

Sheep Laurel

(Heath family)

Kalmia angustifolia L.

Kalmia à feuilles étroites

Sheep Laurel, though normally a plant of our more mature spruce bogs, can also be found on the thin, dry, acid soil of gravelly upland areas. In late June or early July, it puts forth a showy, circular cluster of deep rose-pink flowers giving many of our bog edges a spectacular splash of colour.

It is time well spent to examine an individual flower closely because the pollen distributing mechanism of Sheep Laurel is particularly fascinating. There are ten stamens, each one bent back so that the pollen-bearing anther at the tip is held in a little notch in the nearest petal. When the stamens are released, either by themselves or by being disturbed by a nectar-hunting insect, they spring upright and release a tiny cloud of pollen which may adhere to the insect's body or to the pistil of the same flower – thus assuring fertilization.

Sheep Laurel has another common name, "lambkill", referring to the fact that this plant is poisonous to sheep and domestic cattle, although it apparently has no effect on deer.

Bog Laurel

(Heath family)

Kalmia polifolia Wang.

Kalmia à feuilles d'Andromède

A close relative of Sheep Laurel, and possessing very similar flowers, the Bog Laurel grows in open, shrubby bogs upon a layer of peat – virtually never in the older, treed parts of a bog or on mineral soil like Sheep Laurel.

Reflecting the much more impoverished nutrient supply of its habitat, the Bog Laurel is a much less robust plant than Sheep Laurel with many fewer flowers and leaves.

Like Sheep Laurel, however, and indeed like virtually all our bog heaths, Bog Laurel keeps its leaves all year round as a means of conserving the plant's hard-won supply of the nutrients that are so scarce in the bog environment. This is a helpful adaptation, but one that exposes the leaves to the danger of winter kill. What saves our broad-leaved evergreens such as Bog Laurel from this fate is the snow cover that protects the leaves from the cold temperatures and drying winds of winter. An interesting consequence is that none of these plants is more than about half a metre tall, for if they were they would lose the vital protection of the snow.

The insect-eating Pitcher-plant has a bizarre form and life style.

Labrador Tea

Sheep Laurel

Bog Laurel

Leather-leaf is a common bog shrub.

Yellow Pond-lily

(Water-lily family)

Nuphar variegatum Engelm.

Nénuphar à fleurs panachées

"Water-lilies", including both this one and the common white-flowered species, have among the most beautiful, and by far the largest, individual blossoms of all our Algonquin wildflowers.

But water-lilies have much more than their blossoms to attract our interest. To begin with, they have evolved unique features which enable them to prosper in what, to most plants, are totally formidable conditions. Since they grow in moderately deep water, they don't have to contend with shade from overhead trees. However, the waters they grow in are often so heavily stained that little sunlight reaches the bottom, and there is usually so little oxygen that life would be difficult in any case. The obvious solution to both problems is to send leaves up into the air from the bottom of the pond, but this would mean investing a lot of energy in the growth of strong, supporting stems. Water-lilies have achieved the most economical possible way of getting their leaves to the bright sunlight and rich oxygen of the air by having leaves that float on the surface. This sounds simpler than it is because the leaves of most plants breathe through pores on their lower surfaces. In fact, water-lilies have pores on their upper surfaces – and also special tubes in their stems for getting air down to their roots. As well, they must store enough energy in their large, fleshy rootstocks every summer so that they will be able to send new leaves all the way up to the surface the following spring to replace the ones destroyed by winter ice.

Yet another fascinating aspect of water-lilies is their importance to wildlife. It is almost a cliché, of course, that frogs use lily pads as hunting platforms, and every fisherman knows that bass like to lurk under their protective cover. But even more important is the use of water-lilies by a whole host of lily-eaters. The fact that lily pads almost always show signs of being chewed on by small insects gives us a hint of the high nutritional value of water-lilies. This is confirmed by the fact that Indians used the seeds and rootstocks as food, and by the fact that moose spend much of the summer browsing on lily pads, their flowers, and stems.

The most interesting of all the lily-eaters, however, is the beaver. You may be surprised to learn that our Algonquin beavers hardly ever cut down trees in summer, but rather stay right in their ponds and live almost entirely on aquatic vegetation – of which by far the most important item is water-lilies (flowers and all). This relationship is particularly interesting because in many cases it is the beaver which creates suitable habitat for water-lilies in the first place (by damming up a pond for itself). What is more, beavers often spread water-lilies in their ponds by accidentally dropping or discarding pieces of rootstock they have dug up elsewhere in the pond. It is almost as if the beaver were an unintentional water-lily farmer!

Pickerelweed

(Pickerelweed family)

Pontederia cordata L.

Pontédérie cordée

Pickerelweed is a familiar sight to Algonquin canoeists who find it flowering in dense, shallow-water stands from late July through August. The precise anatomy of the individual flowers has three distinct forms, but usually only one is found in a particular stand. This strongly suggests that most colonies are the result of spreading (by rootstocks in the mud) from a single, colony-founding plant. When all the flowers of an individual spike are finished, the spike bends over and the seeds are released directly into the water.

White Water-lily

(Water-lily family)

Nymphaea odorata Ait.

Nénuphar blanc

Our common White Water-lily suffers a disadvantage simply because it is so common. Any flower as spectacular as this one would, if it were rare, be very famous, and sought after by photographers from around the world. But being so common, the White Water-lily is seen so often, by so many people, in so many different places that we tend to take it for granted.

If this is true in your case, there are a number of fascinating features about the White Water-lily that should revive your interest.

One is the red colour on the under-surface of the leaves. The effect of this red pigment is to raise the temperature of the leaf slightly above that of the surrounding water and this in turn helps speed up the process of transpiration by which the plant rids its tissues of excess water.

A second feature is that the flowers, highly attractive to insects as you might imagine, open early in the morning but close up again by mid-afternoon. Newly-opened flowers do not have pollen of their own but are cross-pollinated by insects bringing pollen from older flowers. The early closing of the flowers may be a device to prolong the life of the pollen supply and to thereby increase the potential number of other flowers that may be pollinated.

A third adaptation of the White Water-lily is that the seeds, though themselves heavier than water, have an air-containing, membranous sac that keeps them afloat long enough so that currents will transport the seeds some distance away from the parent plant. In this way the White Water-lily has been able to colonize just about every place that is suitable, and become the common flower we should never cease to admire.

Common Bladderwort

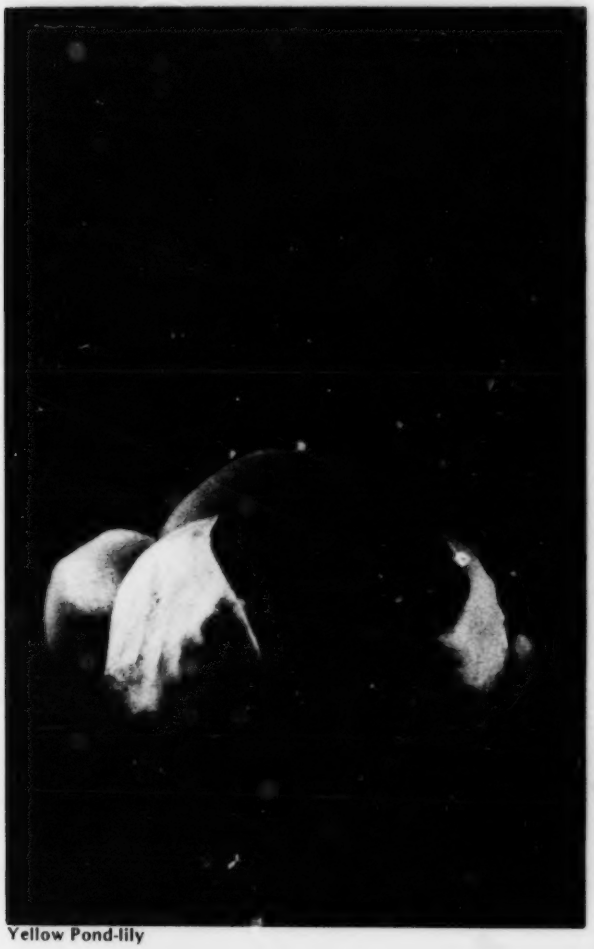
(Bladderwort family)

Utricularia vulgaris L.

Utriculaire vulgaire

Clumps of tiny, bright yellow, sweet-pea-shaped flowers, seen just above the surface of quiet, shallow waters in mid- or late summer in Algonquin belong to one or other of the five species of yellow-flowered bladderworts known to exist in the Park. The Common Bladderwort, which we may take as fairly typical of the group, is a strange plant indeed. It has no roots but only a branching stem with finely divided, almost feathery branches, forming a "weedy", shapeless mass that actually floats just below the surface. Throughout this mass are hundreds, if not thousands, of small dark globules or bladders. Each bladder has a door at one end which snaps inwards when an aquatic insect or crustacean touches the guard hairs that surround it. When this happens, the water outside the door (and with it the tiny prey) rushes into the bladder, the door closes, and digestion begins. Although most victims are necessarily minute, animals as large as mosquito larvae are regularly captured and digested in stages by the tiny bladders.

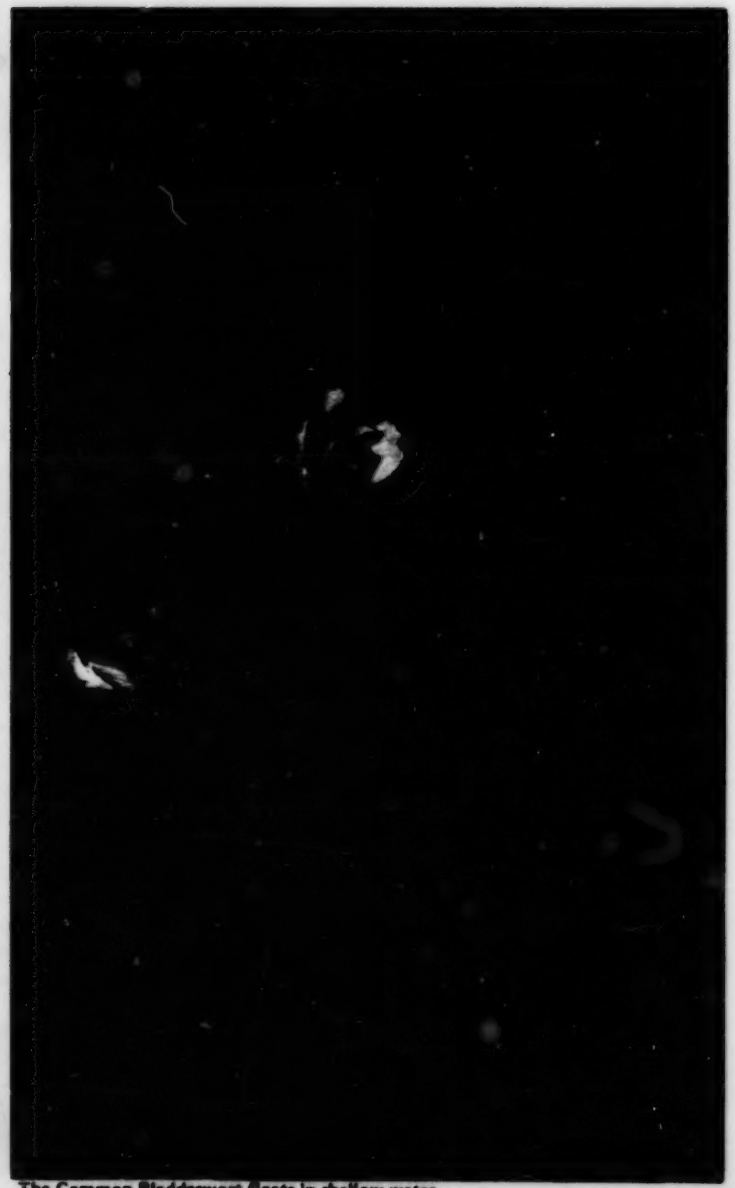
In Algonquin, there are also two species of bladderwort that have rose or purple flowers.



Yellow Pond-lily

Pickerelweed

White Water-lily



The Common Bladderwort floats in shallow water.

Wildflowers of the Roadsides

Of all Algonquin Park's wildflowers, those of the roadsides are seen and appreciated by more people than any others. This is due, not only to their location, but also to the fact that their chief flowering season, July and August, coincides with the period when people come to Algonquin in the greatest numbers. Indeed, even casual summer visitors who travel the Parkway just once, and without getting out of their cars, can hardly help but see a couple of dozen species -- many of them growing in spectacular profusion.

The fact that the dominant, and sometimes the only, impression of Algonquin's wildflowers comes from the ones seen along the roadside is somewhat ironic. The truth is that the roadside habitat is a quite limited and artificial situation, and that the flowers growing there are present only because we humans have made a gross alteration in the landscape. In fact, many of the roadside flowers we see every day and take as a normal part of the Park scene are not native to Algonquin -- or even to North America for that matter. In removing the natural tree cover for roads and rail lines we created unnatural, sunny conditions which few native species could take advantage of, but which were ideal for many plants accidentally introduced from Europe. It is hard to believe but true that several of our most abundant roadside wildflowers found their way here as seeds, unwittingly carried in some traveller's pant cuff or other personal belongings, and that some have been in the Park for less than a century.

But even if these flowers have little to do with the true Algonquin of forests, bogs, and rivers, they are fascinating components of the present day Park, both as illustrations of man's far-reaching impact on Algonquin and as beautiful flowers in their own right.

Canada Goldenrod (Composite family)

Solidago canadensis L.

Verge d' or du Canada (Bouquets jaunes)

Canada Goldenrod is perhaps the most familiar member of the genus to dwellers of the Great Lakes area. It reverses the usual rule of roadside plants being immigrants from Europe, since it is widely cultivated in European gardens from which it has escaped and become well established in the wild state. There are eight species of goldenrod on the Algonquin checklist and all of them are in bloom from mid-August to late September.

Although goldenrods have a bad reputation among hay fever sufferers, the pollen is actually rather heavy and does not travel very far. In fact, if we are to believe the old herbals, goldenrods are anything but unhealthy: the Latin name *Solidago* means "to make whole" and refers to the supposed curative powers of the genus.

Common Evening Primrose (Evening Primrose family)

Oenothera biennis L.

Onagre bisannuel

These metre high, reddish-stemmed plants are a fine example of a native species successfully competing in the roadside habitat against a multitude of alien invaders. Unfortunately, the Evening Primrose is at its best only at night, for its pale yellow, mid-summer blossoms only open fully after dark. This nocturnal habit makes sure that nectar and pollen are available to the hairy moths which are effective pollinators, and not wasted on day flying insects which are unsuitable.

As the Latin name infers, the Common Evening Primrose is a biennial plant which blooms and dies in its second year. The big tap-root can draw water from deep in the ground and adapts the Evening Primrose to the sandy, dry conditions of many of our roadside situations.

The sunny conditions of the roadside are ideal for many wildflowers

Canada Goldenrod

Common Evening Primrose

Fireweed

(Evening Primrose family)

Epilobium angustifolium L.

Epilobe à feuilles étroites (Bouquets rouges)

Here and there along the Parkway, from July into September, the splendid magenta spikes of Fireweed catch the eye of every Park visitor for, growing either singly or in dense stands, they are one of Algonquin's most spectacular wildflowers.

Fireweed is noteworthy not only for its beauty, but also for the fact that it is one of the few native species to do well in a habitat that is usually dominated by European invaders.

In the original roadless wilderness, Fireweed was found in recently burned areas, often seeming to spring from the ashes and clothe the newly opened land within a few months of the fire.

It was also this dependance on fires for the creation of suitable habitat that accounts for the summer-long duration of Fireweed's beautiful spires. Needing full sunlight, it could grow luxuriantly in burns but its days were numbered. To survive, it had to spread to newly created burns before it was shaded out in the old ones. The trouble was that the nearest new burn might be many kilometres away, with nothing but unsuitable forest inbetween.

Fireweed surmounted this problem with a three-part solution. First, it produces truly enormous numbers of seeds; each plant can have over 100 individual flowers and each of these produces about 450 seeds, so that 45,000 seeds from one Fireweed in one year is not unusual.

Of course, being so numerous, the seeds are also very tiny. But this is an advantage as well, since they have long silken strands adapting them to transport by the wind over long distances.

A third feature is that the seed production is staggered over the entire summer with individual flowers starting to open at the bottom of each spike and working up to the top. Because the seeds are not all produced at the same time, the chances were greater that at least some of them would be dispersed at a time and in a direction that would take them to a new burn.

It is interesting that today, with almost total fire suppression, we are more apt to see Fireweed along a roadside – where, thanks to human maintenance of the open habitat, the plant's prodigious investments in seed production and dispersal are no longer really appropriate.

Viper's Bugloss (Blue-weed)

(Borage family)

Echium vulgare L.

Vipérine vulgaire

The first part of this plant's curious name refers to the supposed viper's-head shape of the seeds, and the resultant medieval belief that the plant juice could neutralize the venom of the viper (Europe's only poisonous snake). The second part of the name, bugloss, means ox-tongue and refers to the shape of the deep blue, red-stamened blossoms. According to the old herbals, bugloss tea strengthens the lungs and sharpens the wits, and when worked by bees the flowers yield a blue honey of some medicinal repute. Viper's Bugloss has extended its range westward from Algonquin's East Gate only since the late fifties, and thanks to its deep taproot has formed prosperous colonies in areas of thin, gravelly soil along the roadsides.

The sharp, prickly hairs of Viper's Bugloss are an obvious adaptation to discourage animals from eating it and have no doubt served the plant well in many areas.

Spreading Dogbane

(Dogbane family)

Apocynum androsaemifolium L.

Apocyn à feuilles d'Androsème

The old railway, roadsides, and dry exposed rock outcrops are frequently well endowed with the slender-stemmed, oval-leaved Spreading Dogbane. The small, pink, bell-shaped flowers have nectaries that are positioned in such a way that insects must force their mouthparts between two neighbouring masses of pollen. When the insect has finished feeding, its wet mouthparts stick to the pollen masses and the insect must yank them free. This normally assures that pollen will be transported to other dogbane flowers, but, quite often, small insects are unable to free themselves and they die there.

The name of the plant stems from the belief that it is poisonous to dogs. We do not know if there is any truth to this but the high latex content in the juice of Spreading Dogbane caused it to be considered as a rubber substitute in World War II.

Pearly Everlasting

(Composite family)

Anaphalis margaritacea (L.) C.B. Clarke

Anaphale marguerite (Immortelle)

Pearly Everlasting blooms in great abundance along our roadsides and in almost all dry, sunny areas of the Park throughout August. Along with Fireweed (with which it often shares burned areas), it is one of our few roadside wildflowers that are native to Algonquin. The downy plant, hung up and dried, turns a uniform silvery colour and can be used for dried bouquets. In folk medicine it is used as a salve for burns. Like the Canada Goldenrod, it is grown in European gardens.

Raspberry

(Rose family)

Rubus idaeus L.

Framboisier

We suspect that there are many people who, while perfectly familiar with raspberries, would never recognize the flower which makes possible the fruit we all enjoy so much. It may seem a little strange to find the Raspberry in a book on wildflowers but we think the subtle beauty of the Raspberry flower amply justifies its inclusion.

Ecologically, the Raspberry is one of the most important flowering plants in Algonquin. The millions of berries produced each summer constitute an important food, not only for bears, as everyone knows, but also for many other creatures such as foxes, martens, and Cedar Waxwings to name a few. It is interesting to note, that the abundance of raspberries is directly related to disturbances such as fires, insect outbreaks and logging which create the sunny, open areas required by these plants. The species of wildlife that depend on raspberries for significant parts of their diet are, therefore, benefitted by such destructive forces.

Fireweed, a highly successful native species.

Viper's Bugloss

Spreading Dogbane

Pearly Everlasting

Raspberry flower

Silvery Cinquefoil (Rose family)

Potentilla argentea L.

Potentille argentée

This low, many-branched plant is extremely abundant in favourable, dry, exposed areas such as our roadsides. It is a fine example of a very successful European "import", for it and two other European cinquefoils are generally more common than the Park's seven native species. All cinquefoils are five-petalled (usually yellow), but not always five-leaved as the name (*cinq feuilles*) would suggest. The "silvery" part of this species' name refers to the silvery undersides of the deeply cut, five-part leaf.

The Latin name, *Potentilla*, refers to the supposed medicinal potency of many members of this genus as digestive and blood-purifying agents.

Toadflax (Butter-and-eggs) (Figwort family)

Linaria vulgaris Hill

Linaire vulgaire

Common, especially in the Two Rivers area along the Parkway, Toadflax is another European plant that has only recently become established in Algonquin. It may well become even more common because the sandy, sun-baked roadsides seem ideal for its growth. In common with many aggressive invaders, it is especially apt to spread by underground vegetative reproduction, rather than growing from seed.

The generic name, *Linaria*, refers, as does the English name, to the similarity between the leaves of Toadflax and those of true flax (*Linum*). The juice of Toadflax has been used as a skin lotion or, mixed with milk, as a fly poison.

Bird's-foot Trefoil (Pea family)

Lotus corniculatus L.

Patte d'oiseau

Bird's-foot Trefoil, widely used as cattlefodder, especially in the American mid-west, was introduced to the Algonquin roadside environment in 1962 in the hope of attracting deer. As it turned out, the deer showed no special fondness for it, seeming to prefer the already established clovers (also plants of European origin).

If not for deer, Bird's-foot Trefoil has done very well for itself, and thick, lush expanses of this plant are now a common sight in several areas along the Parkway. It is the slender pod of this plant which suggests a bird's foot.

Common St. John's-wort (St. John's-wort family)

Hypericum perforatum L.

Millepertuis commun

Blooming in open places in Algonquin from mid-July to mid-August, these yellow-flowered, bushy plants from Europe aggressively invade suitable areas thanks to their underground vegetative reproduction. In cultivated regions, they are known to farmers as pernicious, soil-exhausting weeds, but few other plants have figured so prominently in European folklore. Until not so long ago, country people in England would hang sheaves of St. John's-wort at doors and windows to ward off evil spirits. There was also the belief that a sheaf placed under the pillow on St. John's eve (June 23) would afford the sleeper a vision of the place where he would meet his death; and a particularly lush growth of St. John's-wort in the dooryard was thought to presage the marriage of the daughter of the family within the year. An ointment made from the blossoms of this plant was once used to heal cuts and bruises.

There are four species of native St. John's-wort in the Park, all of which are plants of the wetlands.

Cinquefoil, one of many European invaders now common along Algonquin roadsides.

lax

Bird's-foot Trefoil

mon St. John's-wort

Black-eyed Susan (Composite family)

Rudbeckia hirta L.

Rudbeckie hérissée (Marguerite jaune)

This striking roadside flower is another alien invader in Algonquin although not from Europe this time, but from the prairies, having reached eastern Canada about a century ago in shipments of clover seed. Black-eyed Susan, which has become a troublesome weed in certain areas of the farming country to the south of us, thrives on sandy and impoverished soil, and makes a fine display along our roadsides in late July and August.

As with the other members of the Composite family, what appears to be a single flower is actually many hundreds of small flowers (forming the black "eye") surrounded by the ring of golden yellow petals.

Common Buttercup (Crowfoot family)

Ranunculus acris L.

Renoncule âcre (Bouton d'or)

One of the most well-established of the European plants in North America, the familiar field buttercup of the English meadows is also abundant in damper places along the Parkway in Algonquin. The Latin name (*acris*) refers to this plant's bitter, poisonous, and rash-producing sap. To us humans, this may seem a very disagreeable character but it accounts for much of the Common Buttercup's great success. Because animals eat it at their peril, and soon learn to leave it alone, the buttercup has had a great advantage over competing plants in areas where there is heavy grazing pressure.

Heal-all (Mint family)

Prunella vulgaris L.

Prunelle vulgaire

Heal-all blooms all summer and well into the fall in Algonquin, and is to be found in almost all open situations – from roadsides to portages. This herb, whose square stem identifies it as a mint, has long been used in folk medicine as a salve for flesh wounds, and an infusion derived from Heal-all is a traditional remedy for strep throat and ailments of the respiratory system.

The plants we see in Algonquin are native to North America and the Park, differing only slightly from the European form of the same species.

Yarrow (Composite family)

Achillea millefolium L.

Achillée millefeuille

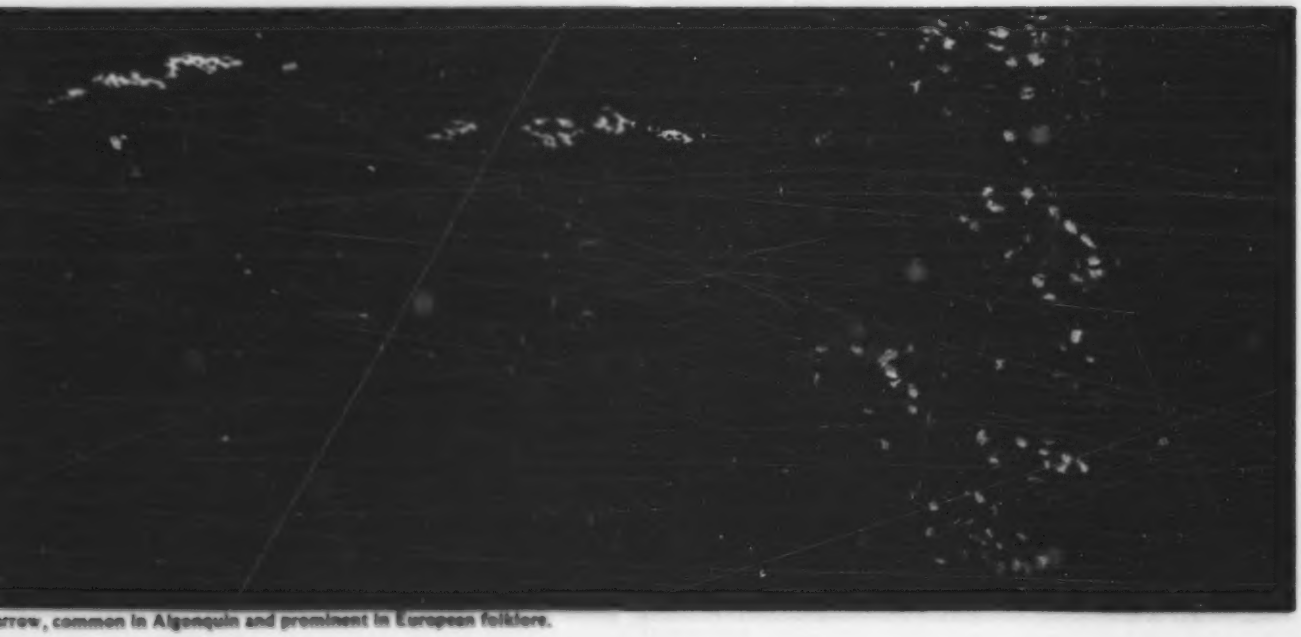
Extremely abundant along our roadsides and blooming continuously from June through October, this plant is associated with many legends. The Latin name is a reminder that Achilles was said to have used Yarrow to cure the wounds of his soldiers, and indeed the sap is a blood coagulant of some value. The name devil-herb which the plant retains in certain sections of New England refers to the belief that the physical presence of the Devil could be conjured up by burning green yarrow and chanting certain magical phrases. In Sweden, yarrow beer is a popular drink; in France, a tea made from the flowers was used to treat fevers; and in Scotland, it was considered to be a sure cure for melancholy and a bringer of pleasant dreams.

The white-flowered form of Yarrow is by far the most abundant in Algonquin but very occasionally one can find blossoms with a purplish hue.

ck-eyed Susan, an invader from western North America.

mmon Buttercup

Heal-all



rrow, common in Algonquin and prominent in European folklore.

Orange Hawkweed (Composite family)

Hieracium aurantiacum L.

Epérvière orangée

It is impossible not to see the Orange Hawkweed in Algonquin during June and July because its brilliant orange blossoms are everywhere along the sunny borders of the Parkway – and in just about every clearing in the interior as well.

Although it is abundant, Orange Hawkweed is a very recent invader from Europe. It was not until 1875, in fact, that Orange Hawkweed was noticed for the first time in North America – near New York. Once having established a foothold, it spread rapidly, reaching Canada in 1889. We do not know exactly when it invaded Algonquin but, since it was not observed by the great botanist, John Macoun, when he surveyed the west side of the Park in 1900, it seems safe to say that Orange Hawkweed only arrived here later in this century.

Oddly enough, Orange Hawkweed is much more common here than it is in its native Europe (where it occurs in isolated mountain colonies). This reverses the usual rule that plants do less well in new surroundings than in their place of origin.

Our new Park resident brings us a fair share of interesting folk mythology. The name "hawkweed" stems from the belief that hawks used the juice of this and other (often yellow) hawkweed species as an effective remedy for failing eyesight. Used by humans, hawkweed was supposed to be good for indigestion, inflammation of the skin, insomnia, scorpion bite, and excessive sexual desire.

Chicory (Composite family)

Cichorium intybus L.

Chicorée sauvage

In Algonquin, Chicory is strictly a plant of the roadsides and has only recently begun to appear in the Park in considerable numbers. The sky-blue flowers, which turn pink on fading, have a sunflowerlike habit of opening wide in the morning, following the sun, and gradually closing in the afternoon. Chicory is, of course, a well-known coffee substitute, and many experts prefer coffee with an admixture of chicory root. In France, the leaves are used (blanched) in salads – a use which dates from Roman times.

Purple Vetch (Pea family)

Vicia cracca L.

Vesce jargeau

This pretty and tenacious little invader from Europe (where it is cultivated as an ornamental plant) tends to prefer wet meadows and rank roadside ditches. By means of tendrils at the ends of its divided leaves, it has the ability to climb on neighbouring plants and get an edge in the competition for sunlight. It is common in most open places along the Parkway, and blooms throughout the summer.

Although closely related to the garden pea, Purple Vetch has been tried and found unsuitable as a green vegetable.

Ox-eye Daisy (Composite family)

Chrysanthemum leucanthemum L.

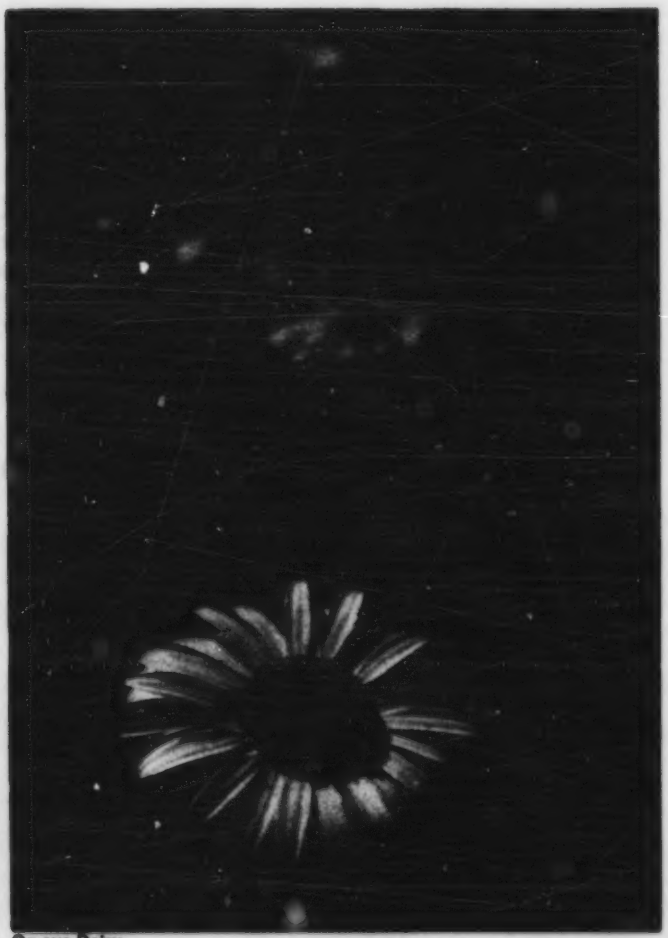
Chrysanthème leucanthème (Marguerite)

Although the Ox-eye Daisy is a native of Europe, it has been in North America since the early years of the seventeenth century and was perhaps the earliest of all our European immigrants. The casual visitor to Algonquin in June and July would probably never guess that the Ox-eye was not always a part of the Park scene, for large stands brighten almost every turn along the Parkway. Being a member of the composite family, its "flowers" are in reality many hundreds of individual flowers (comprising the yellow centre) surrounded by the circle of white petals. Since the number of these petals is variable, the Ox-eye Daisy is one of the few flowers with which it is proper to play the "he-loves-me, he-loves-me-not" game.

nge Hawkweed

Chicory

ple Vetch



Ox-eye Daisy

References

We hope you have enjoyed this introduction – necessarily brief and incomplete – to the wildflowers of Algonquin Provincial Park. For more information and help in identifying wildflowers, we suggest taking advantage of the scheduled wildflower hikes offered during July and August in the Parkway region of Algonquin, or bringing your questions to the Park Museum. The naturalist on duty will be glad to answer your questions.

You may wish to acquire or consult the references listed below.

For further information, and current Algonquin publication lists, address your correspondence to:
The Friends of Algonquin Park
Box 248
Whitney, Ontario
K0J 2M0

1. Check-list of the Vascular Plants of Algonquin Provincial Park
2. A Field Guide to Wildflowers of Northeastern and North-central North America
   by Roger Tory Peterson and Margaret McKenny
   Houghton Mifflin Co., Boston, 1968, 420 pp.
3. Wild Flower Guide
   by Edgar T. Wherry
   Doubleday & Co. Inc., 1948, 202 pp.

PLEASE REMEMBER

Please remember that it is an offence to pick wildflowers in any provincial park. Leave them where they are, to be enjoyed by those who follow in your footsteps.